



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D6101-001
Job Sheet 170392



5038650

Part No: D6101-001

Job Qty: 40 ea

Part Name: Saddle Billet



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 1/16/18

Job Tracking No:

Due Date: 2/6/18

Created By: Diane Baker

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	40 pcs		2/6/18	0.00	0.00	Purchasing		DAS 11 FEB 03 2018
110	Packaging	40 pcs		2/6/18	0.00	0.00	Packaging2		11 FEB 03 2018
120	QC	40 pcs		2/6/18	0.00	0.00	QC6		10 180203 FEB 05 2018
130	Packaging	40 pcs		2/6/18	0.00	0.00	Packaging3-2		SBC 18 FEB 05 2018
140	QC21-SA	40 Ea		2/6/18	0.00	0.00	QC21		11 FEB 05 2018

Part Op 100 - Issue P/O: 038795 a) Description: Alluminum billet b) 6.00" x 6.250" x 2.00" thick c) Tolerance on length
Descriptions: are +0.030"/-0.000"/E+/-0.008" d) Grain direction along 6.00" length e) Material: 7075-T7351 (QQ-A-250/12)
110 - Ensure material certification is attached
120 - Ensure Material certification comply to Dwg D
130 - LOCATION: MAT042
JAN 16 2017

Job Allocations

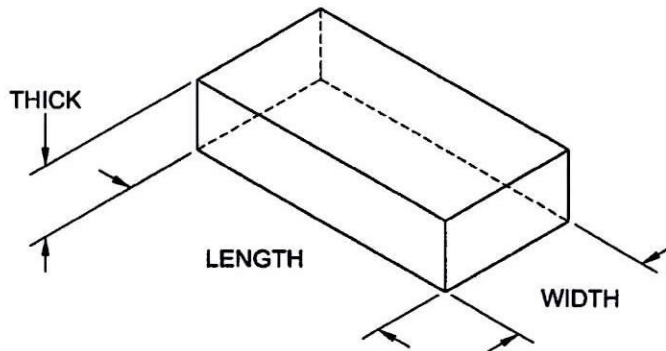
Operation	Component Part	Required	Inventory	Allocated	Std Qty
100-Purchasing	D6101-001P	40	0	0	0

Part Specifications

Specifications could not be found.

Plex 1/16/18 9:06 AM dart.baker.diane

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3501047

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 01-FEB-18	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 3501047-2	

Shipment Details	Final Destination Branch - TOR
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Order No 5014841	Line No 1	Item No 752237.MO	Description 2.0000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT RECTANGLE TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 6")) X 6 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 6")) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12				
Purchase Order No 38795		Part Number YOUR ITEM NUMBER: D6101-001		Ordered Qty 40.00 PCS		Invoice Qty 40.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No. 121567575	Mill/Source CONSTELLIUM ROLLED PRODUCTS	Heat Number 	Mech Id	PCS 40	Width (IN)	Length (IN)	Shipped Qty(LBS) 309.6638

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A. M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.



Constellium



CERTIFIED TEST REPORT
Constellium Rolled Products
Ravenswood, LLC

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A M CASTLE & COMPANY
4175 ROYAL DRIVE
KENNESAW GA
30144
US

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A M CASTLE
1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE 110561144 4776 INCLUSION Serial:20170815-0110561144 Pg 1of4

CUSTOMER PURCHASE ORDER NO. & ITEM
428378

Constellium ORDER NO.
211224

ALLOY	CLAD	TEMPER	GAUGE	WIDTH	LENGTH
7075		T7351	2.00000 in 50.80 mm	48.50000 in 1,232 mm	144.50000 in 3,670 mm

ITEM ORDERED
SPEC PLATE, SAWED
MILL FINISH

CUSTOMER SPECIFICATION
AMS 4078J

PART NUMBER
752237

B/L NUMBER
85350

DATE SHIPPED
08/15/2017

WT. SHIPPED
11410.000 LB

NO. OF PIECES
000008

GOVT. CONTRACT NO.

CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."
Constellium Rolled Products Ravenswood, LLC
859 Century Road
P.O. BOX 68
RAVENSWOOD, WV 26164 USA

Steve Good

Steve Good - Laboratory Manager

ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC W/ 0.125" DEADZONE Class A
AMS QQ-A-250/12A
AMS STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE
ASTM B209-14
BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE
CMMP025 REV U
CST1006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE
DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE
GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE
MMS 159T
PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE



Load Details

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001577263	1,435.000	650.805	9394181	01		
1001577263	1,435.000	650.805	9394181	02		
1001577264	1,438.000	652.265	9394181	03		
1001577264	1,437.000	651.812	9394181	04		
1001577356	1,423.000	645.461	9394160	01		
1001577356	1,422.000	645.008	9394160	02		
1001577357	1,410.000	639.565	9394160	03		
1001577357	1,410.000	639.565	9394160	04		

Lot: 9394181



CERTIFIED TEST REPORT
Constellium Rolled Products
Ravenswood, LLC

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A M CASTLE & COMPANY
4175 ROYAL DRIVE
KENNESAW GA
30144
US

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A M CASTLE

1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE		110561144		4776		INCLUSION		Serial:20170815-0110561144		Pg 2of4	
CUSTOMER PURCHASE ORDER NO. & ITEM 428378						Constellium ORDER NO. 211224					
ALLOY 7075		CLAD		TEMPER T7351		GAUGE 2.00000 in 50.80 mm		WIDTH 48.50000 in 1.232 mm		LENGTH 144.50000 in 3.670 mm	
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION AMS 4078J											
PART NUMBER 752237				B/L NUMBER 85350				DATE SHIPPED 08/15/2017			
WT. SHIPPED 11410.000 LB				NO. OF PIECES 000008				GOVT. CONTRACT NO.			
										Steve Good - Laboratory Manager	
Tensile - Room Temperature (US)											
		Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report			
Direction	Tests	Min	Max	Min	Max	Min	Max				
LT	02	74.5	74.5	63.3	63.4	12.0	12.5				
Tensile - Room Temperature (SI)											
		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report			
Direction	Tests	Min	Max	Min	Max	Min	Max				
LT	02	514	514	436	437	12.0	12.5				
Conductivity % IACS MIN 38.8 MAX 39.1 % MS/M MIN 22.5 MAX 22.7											
Chemistry (Actual)											
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR		
Core	0.05	0.14	1.32	0.03	2.59	0.20	5.37	0.04	0.00		
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER											
All material contained in this lot was cast and manufactured in the USA											
Lot: 9394160											
P-860-155D REVISED: 10 2014											



Constellium



CERTIFIED TEST REPORT

Constellium Rolled Products
Ravenswood, LLC

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A M CASTLE & COMPANY
4175 ROYAL DRIVE
KENNESAW GA
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A M CASTLE
1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE 110561144 4776 INCLUSION Serial:20170815-0110561144 Pg 3of4

CUSTOMER PURCHASE ORDER NO. & ITEM
428378

Constellium ORDER NO.
211224

ALLOY 7075	CLAD	TEMPER T7351	GAUGE 2.00000 in 50.80 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm
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ITEM ORDERED
SPEC PLATE, SAWED
MILL FINISH

CUSTOMER SPECIFICATION
AMS 4078J

PART NUMBER
752237

B/L NUMBER
85350

DATE SHIPPED
08/15/2017

WT. SHIPPED
11410.000 LB

NO. OF PIECES
000008

GOVT. CONTRACT NO.

CERTIFICATION

"Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination."
Constellium Rolled Products Ravenswood, LLC
859 Century Road
P.O. BOX 68
RAVENSWOOD, WV 26164 USA

Steve Good - Laboratory Manager

Tensile - Room Temperature (US)

Direction	Tests	Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	73.5	74.4	62.4	64.0	12.0	12.5	

Tensile - Room Temperature (SI)

Direction	Tests	Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	507	513	430	441	12.0	12.5	

Conductivity % IACS MIN 38.5 MAX 39.3 % MS/M MIN 22.3 MAX 22.8

Chemistry (Actual)

	SI	FE	CU	MN	MG	CR	ZN	TI	ZR
Core	0.05	0.14	1.32	0.03	2.59	0.20	5.37	0.04	0.00

OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER

All material contained in this lot was cast and manufactured in the USA

QUALITY TEXTS:
AMC CA-15413A R B



Constellium



CERTIFIED TEST REPORT
Constellium Rolled Products
Ravenswood, LLC

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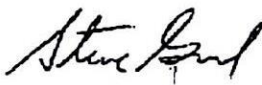
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A M CASTLE & COMPANY
4175 ROYAL DRIVE
KENNESAW GA
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A M CASTLE
1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE		110561144		4776		INCLUSION		Serial:20170815-0110561144		Pg 4of4	
CUSTOMER PURCHASE ORDER NO. & ITEM 428378						Constellium ORDER NO. 211224			CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  Steve Good - Laboratory Manager		
ALLOY 7075	CLAD	TEMPER T7351	GAUGE 2.00000 in 50.80 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm						
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION AMS 4078J											
PART NUMBER 752237			B/L NUMBER 85350		DATE SHIPPED 08/15/2017						
WT. SHIPPED 11410.000 LB		NO. OF PIECES 000008		GOVT. CONTRACT NO.							

THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW.

CHEMISTRY BY OES: ARKSPARK

CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT

WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399

WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557

DUNS Number: 090570149; CAGE Code: 1YW19

Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product.

"END OF CERTIFICATION"



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

Reviewed by Authorized Castle Metals Representative:

Date:

Name:

FEB 01 2018



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 06101-001
 DATE: FEB 03 2018

PO BATCH NO.: 038795/503865

MATERIAL CERT REQ'D: yes
 QUANTITY RECEIVED: 40 Pcs
 QUANTITY INSPECTED: 40 Pcs
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.000
 THICKNESS RECEIVED: 2.000
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N	
CORRECT FINISH	☒ Y N	
CORROSION	Y ☒ N	
CORRECT GRAIN DIRECTION	☒ Y N	
CORRECT MATERIAL PER M-DRAWING	☒ Y N	AMS QQ-A-250
CORRECT THICKNESS	☒ Y N	
PHOTO REQUIRED	Y ☒ N	
CORRECT REF # TO LINK CERT	☒ Y N	Heat # 9394181
CORRECT MATERIAL IDENTIFICATION	☒ Y N	
CORRECT M# ON THE MATERIAL	☒ Y N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS</u> <u>11</u> DATE: <u>9-89 FEB 03 2018</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in.